

# Travel

## is Good for the Brain

By Rita Hitching, B.Sc M.Sc.

**S**chool holidays are nearly upon us, and you may be excited about what the summer will bring. Sleeping in, no homework, no assignments, staying up late, sleepovers, pool parties. Some of you may be even going on a trip somewhere. Visiting family or friends in another state, or even traveling to another country. You may be reluctantly 'tagging' along to the family holidays plans, and would probably prefer to stay home and play computer games or hang out at the mall. Trust me when I tell you that travel is good for you, and for your brain. Don't believe me, let me explain.

Your teenage brain is glorious - if you didn't know that already. Neuroscience has shown that the brain goes through critical periods of growth and development - while in the womb, the first year of life, and the early years, right into adulthood. What scientists have more recently

discovered is that the brain undergoes a 'secret mission' of change during the period between the ages of 12 to 19 years, that is truly unique.

The scientific benefits of travel are multiple, including physical changes to brain areas, increased knowledge, personal development, mental and physical health.

### Brain Growth

Travel kick-starts neuronal generation. The experience of being in a different location, removed from the routines it has become used to, requires the brain to process novel stimuli and new situations. This stimulates your brain to interpret events in unexpected ways. The processing of unfamiliar faces, unique tastes and smells of new foods, learning even a few words of another language, all boosts the brain. The consequence of needing to make sense of new events, is that it requires the brain to use previously underutilized neural pathways and to generate new ones. This neuronal growth yields cognitive improvements - better memory, the ability to process more complex information, demonstrating faster reaction times when problem solving, superior encoding and recall of information.

It is impossible not to increase your knowledge of the world due to travel, the names of new cities, towns, cultures, customs, accents, and traditions. Teenagers that travel, have a greater awareness of the world, and have been shown to be more creative and lateral thinkers. The learning of new information, and the ability to be flexible, makes the brain more adaptable. The ability to adapt to new situations increases the brain's neuroplasticity - its ability to make new axonal connections as a consequence of learning new information.

Still not convinced? Research using functional magnetic resonance imagery (fMRI - which measures brain activation due to changes in blood flow) looks different when you are in familiar and unfamiliar settings. Brain areas that are active require more glucose (delivered by the blood vessels in the brain), for processing information than when the brain is 'relaxed or in familiar settings'. When the brain is



at rest it is described as being in its 'default mode network' (DMN). The DMN includes the medial temporal and prefrontal cortex, posterior cingulate cortex, central precuneus and the parietal cortex. When you travel the brain is prompted out of the DMN into the salience and attention network' (SN and AN) to process this new information. The SN and AN includes the dorsal anterior cingulate, anterior insular cortices, and the insula.

## Personal Development

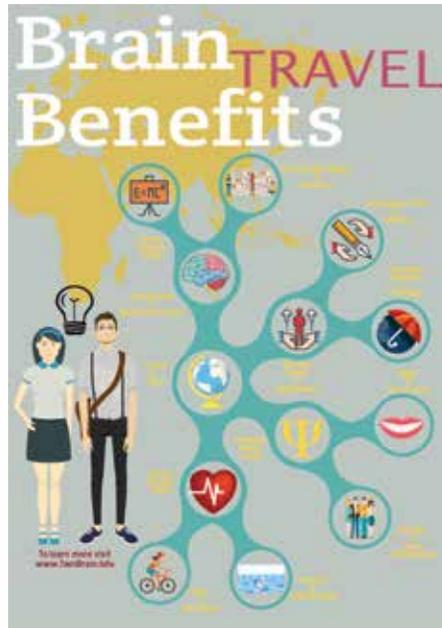
The impact of travel also extends to broadening your social skills, enabling you to make new friends. Your sense of self or who you are grows from traveling, and makes you more resilient and flexible. If you eat out when you travel, you are likely to try new foods, need to be flexible and consider eating something unfamiliar, and not get too upset if you end up not liking it too much. Travel takes you out of your comfort zone. You and your brain need to use new strategies to solve new problems, forcing your brain to have to think 'outside of the box'. The ability to deal with novel situations and manage them well leads to increased self-esteem. You also have greater confidence as you have experiences and stories to share with others.

Travel changes your personality, it makes you more open minded and willing to interact with situations and people that you may previously not have been interested in or willing to consider. Learning about other cultures makes you more trusting of others, and you understand that more and more people share the same values - kindness, generosity and care for others. Visiting new locations makes you realize the scale of the world and the various ways people live in it. It makes you more humble. Travel facilitates your ability to manage your emotions, and be less reactive to situations or people that may say or do things that previously made you react in an emotional way - you basically become more agreeable or easy going. You become more patient and tolerant, as the process of travel often involves long wait times, unexpected delays or changes of plan.

## Mental & Physical Health

Travel exposes you to different environments, which create stronger antibodies (the proteins that protect your body against pathogens) due to exposure to different bacteria. It lowers stress levels, by being away from the commitments of everyday life, your mind and body can decompress. Visiting new locations keeps you fit, as you are likely to spend time walking and exploring new areas. Your mental clarity improves and neuronal and axonal damage is reduced. Travel boosts your mood - research has even shown that even the anticipation of travel can make you feel happier. Having a holiday in the calendar makes you more positive about your health, economic situation and general quality of life. Relationships and sense of connection with others is strengthened - it's likely to help you notice what shared interests you have with your family. You might even enjoy your sibling's company! Travel lowers depression, anxiety and other mental disorders.

Remember travel does not necessarily mean going to exotic destinations like Kathmandu or Santiago, it can be a day trip to a new town, a museum, or event going for a hike. The impact is the same, it jump starts your brain into neuronal generation. So, when you return to school in August, you will feel re-energized and reinvigorated to set new goals and crush them. Enjoy your vacation time, you deserve it.



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